
# REAL TIME COMPUTER
# SEA BASED/LAND BASED
# HWCI


# Real Time Computer
# HWCI Requirement to EB allocation

## REQUIREMENTS MATRIX SUMMARY

41 Total Requirements

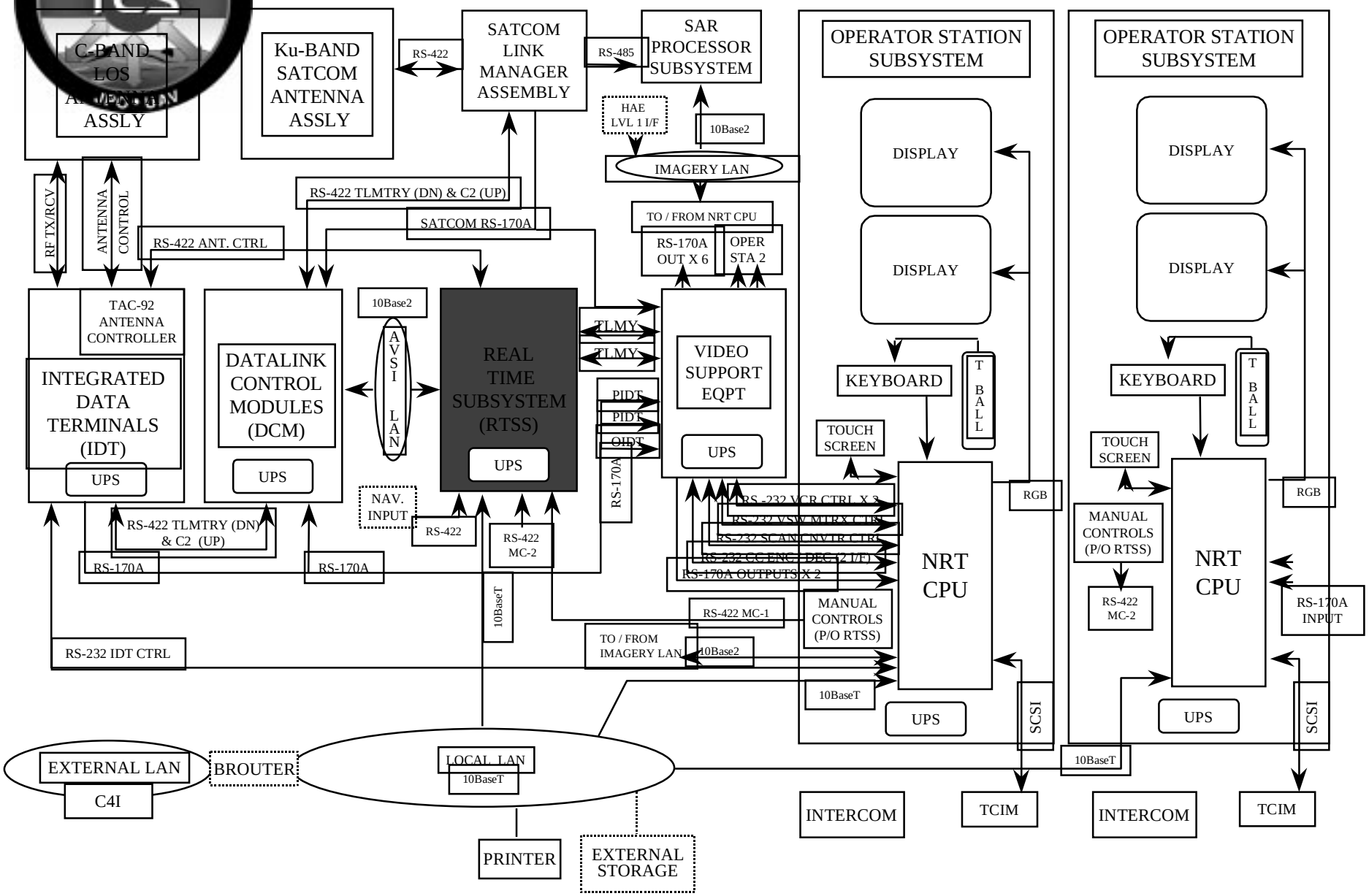
HWCI Requirements to EB Allocation

180 With EB3

8 With EB4

12 With EB5

# TCS RTP HARDWARE DESIGN




# Real Time Computer

## Environmental Considerations

- Temperature:
  - 743i Operation: -5 to 55 C Non-Operation -40 to 70 C
  - CD-Rom Operation: -5 to 40 C Non-Operation -10 to 60 C
  - 4mm DAT Operation: 5 to 40 C Non-Operation -40 to 70 C
  - Drive Enclosure Operation: 0 to 50 C Non-Operation -45 to 85 C
  - VME Chassis Operation: 0 to 50 C
- Humidity:
  - 743i Operation: 40 C:95% RH Max
  - CD-Rom Operation: 22C:8% to 80% Non-Oper @60C 5% to 95%
  - 4mm DAT Operation: 26C 20% to 80% RH max
  - Drive Enclosure Operation: 8% to 70% Non-Operation 5% to 95%
  - VME Chassis Unavailable

# Real Time Computer HWCI

## Functional Description

The Real Time Subsystem consists of the HWCIs and the CSCIs necessary for the real time processing of data

The Real Time Subsystem will have a Real Time Computer HWCI and a Manual Control HWCI

The purpose of the Real Time Computer HWCI is to provide real time processing capability to the TCS


# Real Time Computer

## External Subsystem Interface

422 Serial Interface to IDT switching

232 Serial Interface to Manual Controls

10 Base T Operator Console Local Network Interface

10 Base 2 AVSI Network Interface to DCM(s)

SCSI 2 Interface to Removable Hard Drive(s)

422 Serial Interface to NAVSSI on Sea Based

# Real Time Computer

## Internal Subsystem Interface

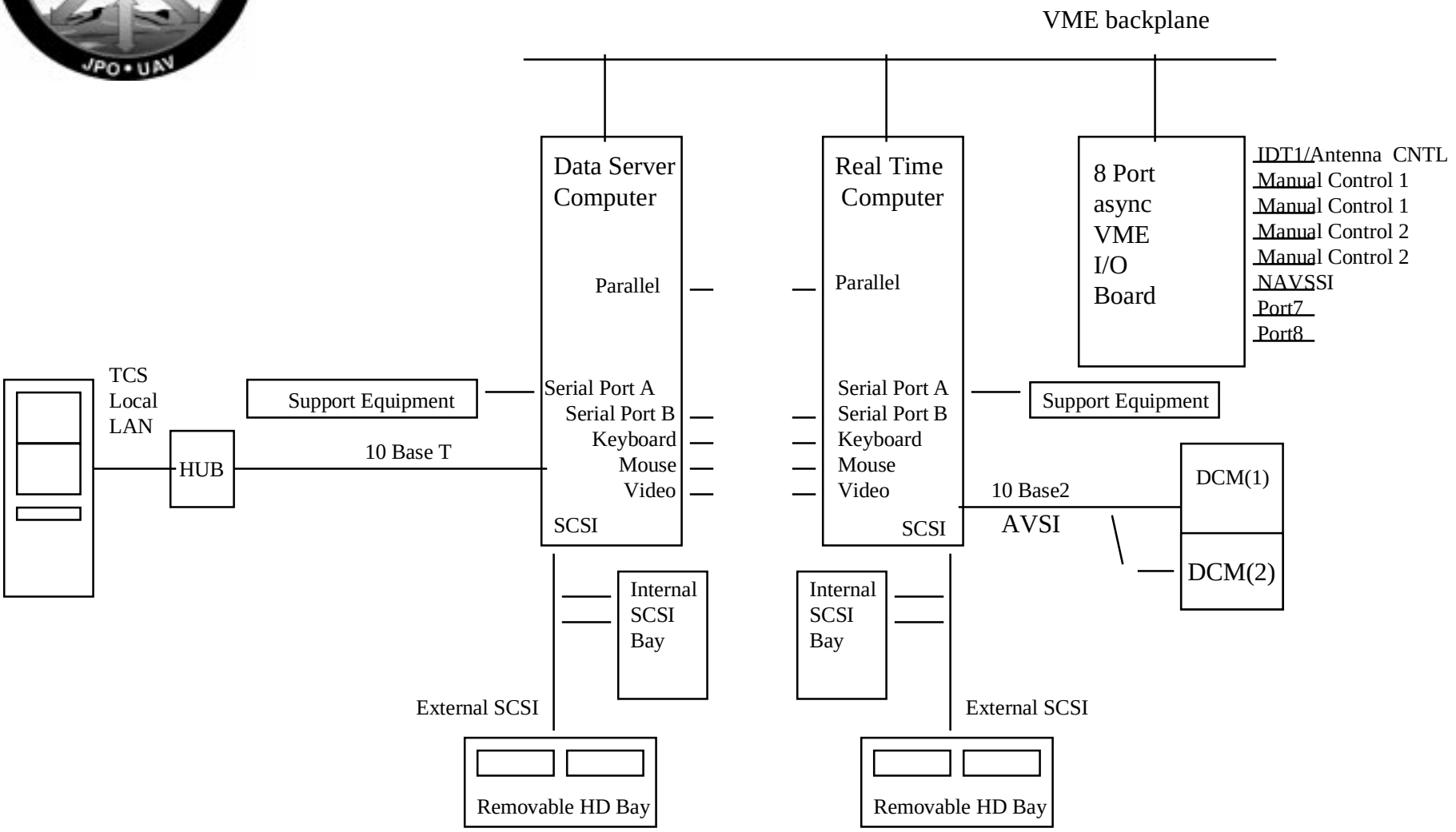
Serial Interface to Support Equipment

Network interface over VME Backplane to Data Server

SCSI interface to

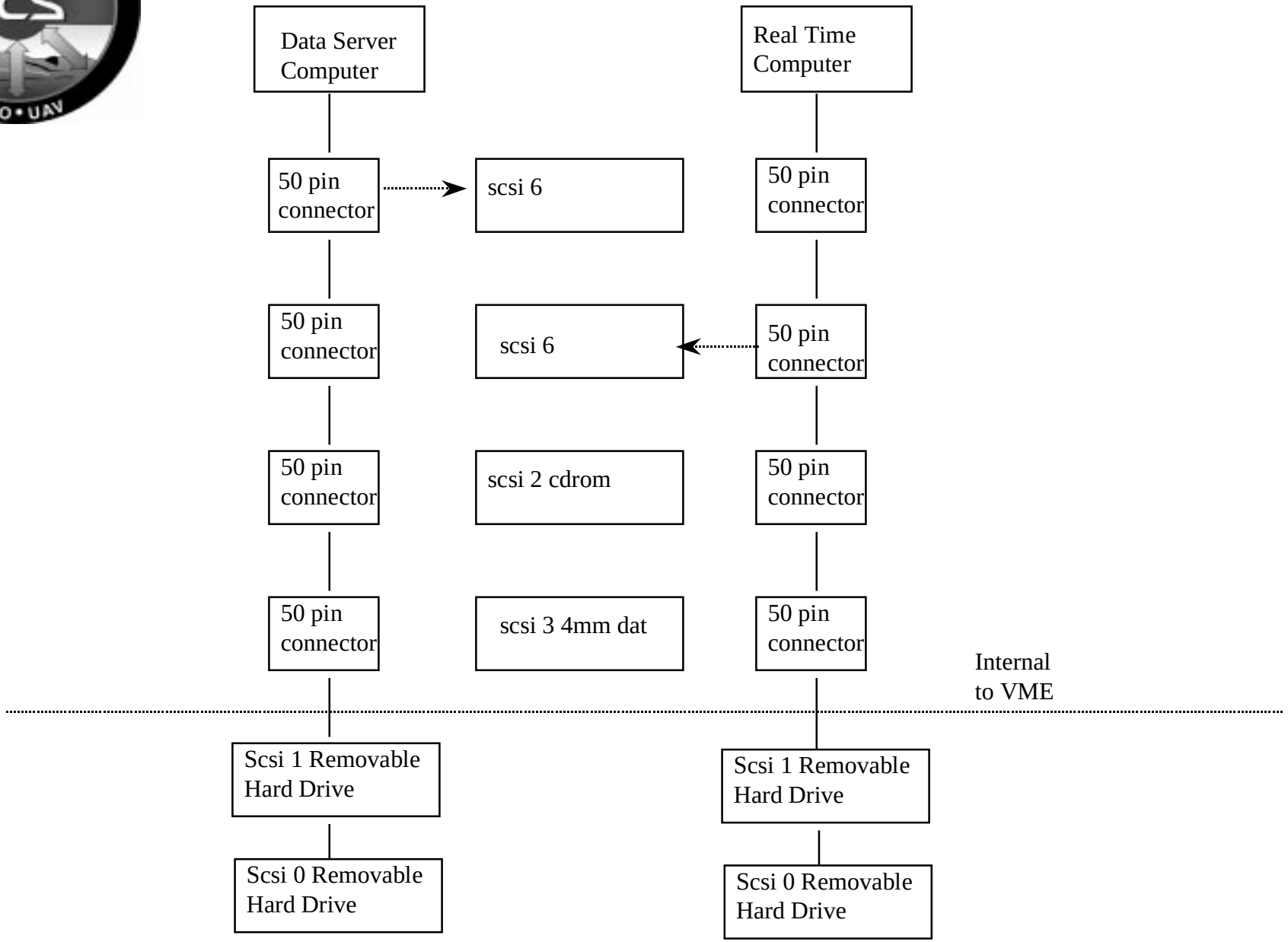
- CDROM
- 4mm DAT Drive
- Hard Drives

# Real Time Computer
# Preliminary Design Drawings Serial Connections

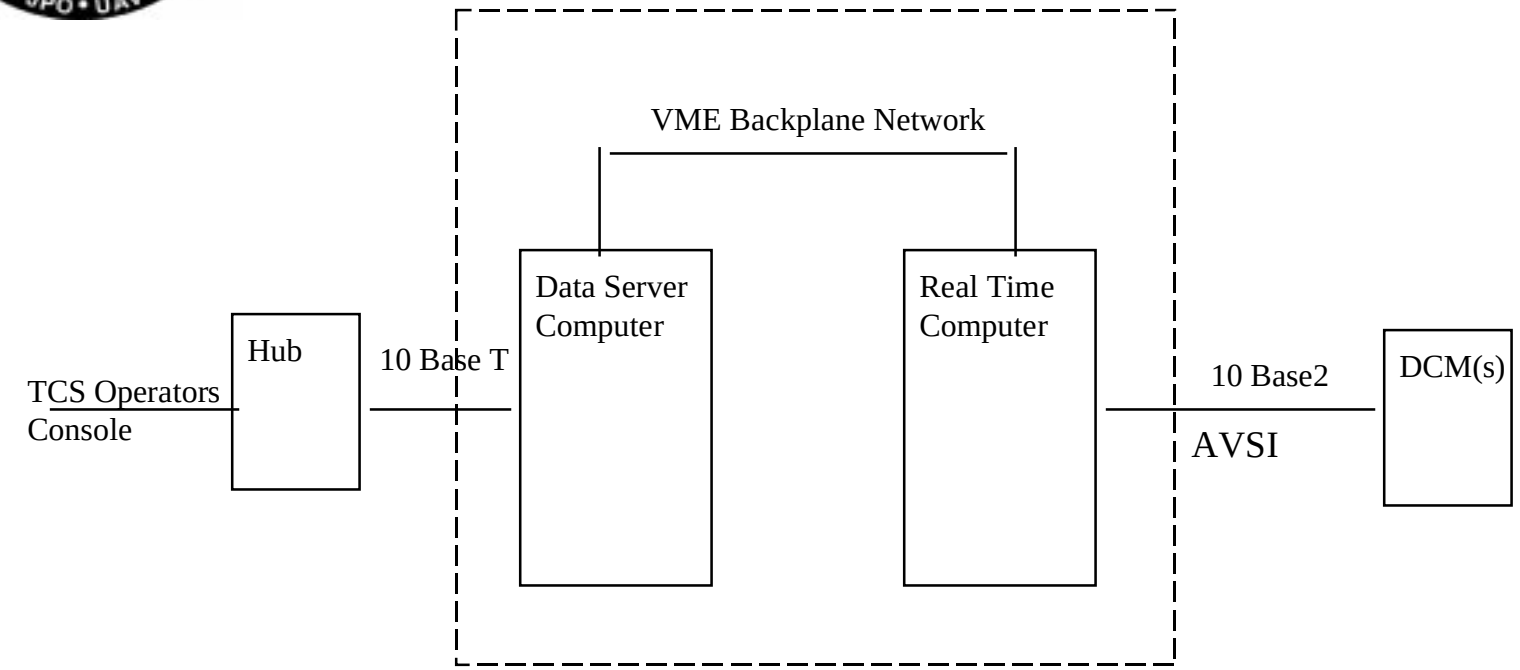



VME Connections

# Real Time Computer
# Preliminary Design Drawings SCSI Connections



# Real Time Computer
# Preliminary Design Drawing
# Network Connections



# Real Time Computer Specifications

- All Real Time Computer HWCI's are COTS
- Packaging is commercial
- Documentation is vendor provided
- Support Equipment
  - External Terminal for Diagnostics
- EMI elements are under investigation
- Dimensions 17.50"H 19.00"W 22.00" D
- Power

  1.50 amp Peak 1.30 amp Operational

  114.30 Unit Volts 148.59 Volt Amps

# Real Time Computer Parts List

2 HP Model 743i/100 with On-Board 8-Plane Graphics
4 RAM expansion - 64MB
1 Multi-drive removable hard disk drive chassis
external rack-mount (SE-SCSI)
2 Removable hard disk drive (2GB) (in docking canister)
1 VME Serial Interface Card
1 CenterCOM RKMT-5 Rack Mount
1 VME Back Plane Networking Software
1 CenterCOM Ethernet Hub, 12RJ45, 1AUI